

Typification of *Physcia aipolioides* (*Physciaceae*, lichenized fungi)

JIŘÍ LIŠKA¹, EVA LISICKÁ² & ANNA LACKOVIČOVÁ³

¹*liska@ibot.cas.cz*

*Institute of Botany, Academy of Sciences
CZ-252 43 Průhonice, Czech Republic*

²*eva.lisicka@gmail.com*

Dlhá 15, SK-900 31 Stupava, Slovakia

³*anna.lackovicova@savba.sk*

*Institute of Botany, Slovak Academy of Sciences
Dúbravská cesta 14, SK-845 23 Bratislava, Slovakia*

Abstract – The nomenclature of *Physcia aipolioides* is discussed and a lectotype is designated. Taxonomical notes on this species and similar taxa are appended.

Key words – *Ascomycota*, lichens, *Teloschistales*, types

Introduction

The genus *Physcia* s.l. has been taxonomically studied by several authors, including Czech lichenologist Josef Nádvorník (1906–77). Nádvorník (1947) described several new taxa in his monograph on the family *Physciaceae* based on research in the former Czechoslovakia. During our work dealing with mapping the distribution area of *Physcia aipolioides* (Lisická et al. 2008), we also studied Nádvorník's original material. We discovered that a holotype had not been determined and that a lectotype should be designated.

Nomenclatural notes

Nádvorník (1947) described the species as *Physcia biziana* var. *aipolioides*, providing a protologue in French (Nádvorník 1947: 82–83) and also attaching a Latin diagnosis together with diagnoses of the other newly described taxa at the end of the article (Nádvorník 1947: 123–124). Therefore, these taxa are validly published. In total, 7 specimens are mentioned in the protologue (6 from the present territory of the Czech Republic, 1 from Slovakia). A holotype was not designated, and all these specimens are syntypes. Czech lichenologist Jindřich

Suza (1890–1951) collected six specimens, all of which are in the herbarium PRM. One specimen collected by Nádvorník (Uherské Hradiště, Hluk, *Salix*) has not been found in either PRM or BRA, where Nádvorník's complete herbarium is now deposited. There are further specimens from this locality, edited in the exsiccate '*Physciaceae exsiccatae*' (Dec. 3, ed. 1951, No 24) by J. Nádvorník; however, as they were collected later (July 10, 1949), they are considered to be merely topotypes (for instance, one specimen from Černohorský's herbarium is now in PRC). [Note: No 25 of this exsiccate is from the same locality but from a different phorophyte, *Populus nigra*.]

Typification

Physcia aipolioides (Nádv.) Breuss & Türk, Wiss. Mitt. Niederösterreich. Landesmus.

11: 114, 1998

FIG. 1

BASIONYM: *Physcia biziana* var. *aipolioides* Nádv., Stud. Bot. Českoslov. 8: 123, 1947

Lectotype – [Czech Republic] Moravia, ad corticem *Aceriarum* [corrected in pencil by Suza as *Robinia*, probably correctly] prope Miroslav, IV. 1923 leg. J. Suza (PRM 640100); **designated here**.

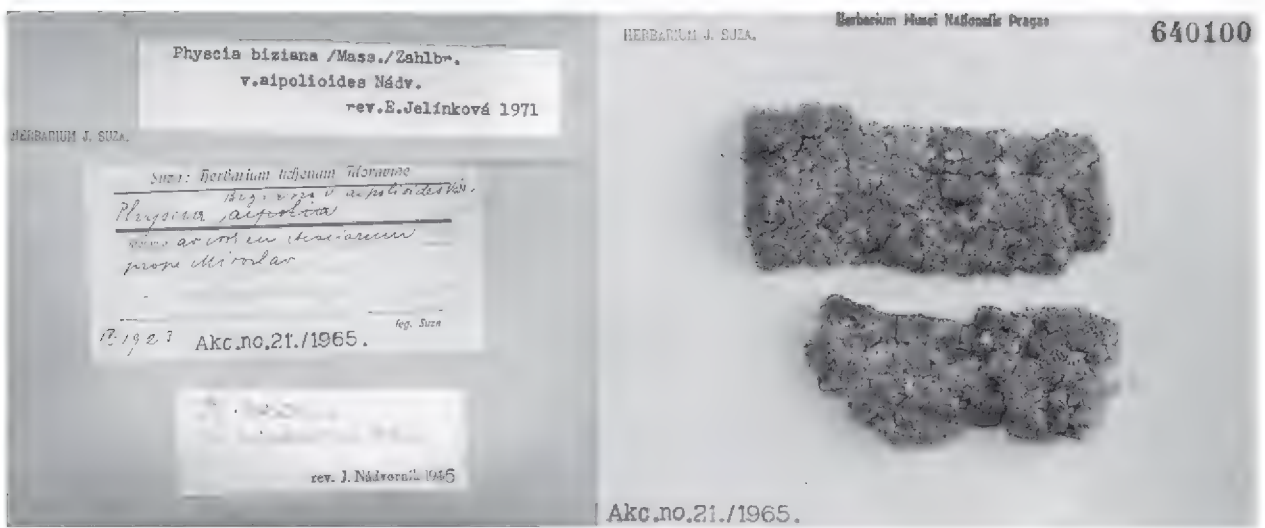
SYNTYPES (NEOPARATYPES) – Moravia, ad corticem *Tiliae* in colle Děvičky montium Pavlovské kopce, ca 400 m, V. 1922 leg. J. Suza (PRM 640104); Moravia, Hodonín, ad *Tilias* juxta viam publicam versus Lužice, ca 160 m, V. 1923 leg. J. Suza (PRM 640099); Moravia, ad *Robinias* secus viam publicam inter Popovice [recte Popice!] et Pouzdřany, ca 200 m, VIII. 1922 leg. J. Suza (PRM 640102); Moravia, ad *Tilias* ad viam prope Liliendorf [Lesná] – Čížov apud Znojmo, 400 m, 1.5.1920 leg. J. Suza (PRM 640103); Moravia, Uherské Hradiště, Hluk, *Salix*, leg. J. Nádvorník (not found); Slovakia, Inovec, Sereď – Sv. Chrásť [Vinohrady nad Váhom], ad viam publ. ca 150 m, *Robinia pseudacacia*, VIII.1930 leg. J. Suza (PRM 640105).

COMMENTS: All specimens cited above were identified/revised by J. Nádvorník in 1945 and were later revised by Jelínková in 1971 and 1972. The lectotype was designated on basis of a rich collection that contained a well developed specimen with only few thalli of *Phaeophyscia orbicularis* and one small thallus of *Xanthoria parietina* intermixed.

Among the syntypes, PRM 640103 was initially labeled as *Physcia leucoleiptes*, with "*Ph. Biziana* v. *aipolioides*" later added to indicate a mixed collection. In 1945 J. Nádvorník annotated PRM 640105 as "*P. biziana* f. *granuligera*" – however he did not cite this name in his monograph (Nádvorník 1947).

Taxonomical notes

Physcia aipolioides is a species of the *P. stellaris* group – section *Stellaris* (Lynge) J. W. Thomson (see Thomson 1963). *P. biziana* also belongs to this group, but its thallus is smaller and splits into small secondary lobules. The *P. aipolioides* thallus is larger, thick and soft, with broad lobes that are pruinose at the margins; the centre of the thallus is verrucose but without lobules, apothecia are larger,

FIG. 1. The lectotype of *Physcia aipolioides*.

and thallus colour is grey (with a slightly yellowish tinge in herbaria) with irregular yellow patches on the underside. Huneck & Lisická (1990) identified atranorin and zeorin as secondary metabolites. Both species differ slightly not only morphologically, but also ecologically (*P. aipolioides* is an epiphytic lichen, while *P. biziana* also grows on rocks) and chorologically (*P. aipolioides* is primarily distributed in Central Europe, while *P. biziana* is a Mediterranean species). However, the distribution areas of both species are not sufficiently known yet.

Several infraspecific taxa have been described in *P. biziana* (syn. *P. ragusana* Zahlbr.):

Physcia biziana* var. *argentata (Zahlbr.) Lynge, Rabh. Krypt.-Fl. IX, Abt. 6: 85, 1935

= *Physcia ragusana* var. *argentata* Zahlbr., Oesterr. Bot. Z. 53: 335, 1903

Physcia biziana* var. *cinerata (Zahlbr.) Lynge, Rabh. Krypt.-Fl. IX, Abt. 6: 85, 1935

= *Physcia ragusana* var. *cinerata* Zahlbr., Oesterr. Bot. Z. 53: 335, 1903

Physcia biziana* var. *granuligera (Zahlbr.) Gallé, Bot. Közlem. 48: 50, 1959

= *Physcia ragusana* var. *granuligera* Zahlbr., Oesterr. Bot. Z. 55: 66, 1905

Physcia biziana* var. *phyllidiata Poelt & Vězda, in Vězda, Lichenes rariores exsiccati Fasc. 9 (nos 81–90): 3, 1993

Physcia biziana* var. *saxicola (Zahlbr.) Lynge, Rabh. Krypt.-Fl. IX, Abt. 6: 85, 1935

= *Physcia ragusana* f. *saxicola* Zahlbr., Oesterr. Bot. Z. 53: 335, 1903

Some additional varieties represent other taxa [*P. biziana* var. *leptophylla* Vězda = *Physcia rondoniana* Clauzade & Vězda; *P. biziana* var. *pulvinata* (Zahlbr.) Gallé = *Physconia grisea* (Lam.) Poelt], and *P. biziana* var. *corrugata* Dzhur. was invalidly published. Variability and distribution of infraspecific taxa within

P. biziana (incl. var. *aipolioides*) has been studied by Jelínková (1973) in eastern Central Europe.

Chorological notes

The aforementioned infraspecific taxa are poorly known and their distributions are often limited to localities mentioned only in protologues. Taxa described by Zahlbruckner are known only from Croatia, *P. biziana* var. *granuligera* from Hungary and *P. biziana* var. *phyllidiata* from Austria, Sardinia and recently also from Albania (see Hafellner & Kashta 2003: 140).

Distribution of *Physcia aipolioides* has been studied by Lisická et al. (2008). Originally, the area of known distribution covered SE Czech Republic, SW Slovakia, NE Austria and Hungary. Later, some outlying localities were discovered in the Czech Republic (central Bohemia and N Moravia), E Slovakia, and Upper Austria (Oberösterreich). Recently, *P. aipolioides* has also been found in Bulgaria and Monte Negro (see Lisická et al. 2008). Additional distributional data is needed before the relative rarity of this lichen can be determined.

Acknowledgements

We thank staff of the PRM herbarium, Dr Jana Kocourková, and Lenka Edrová for their help with loan of materials, Dr Othmar Breuss, Dr Pavol Lizoň, Dr Lorelei L. Norvell and Dr Shaun R. Pennycook for their valuable comments on the manuscript. We are grateful to Mr. Michael Simonds for linguistic corrections. This project was supported by grants GAAVČR no IAA600050712 and AVČR no AV0Z60050516 (to J. Liška) and APVV-51-040805 and VEGA 7068 (to A. Lackovičová and E. Lisická).

Literature cited

- Hafellner J, Kashta L. 2003. Miscellaneous records of lichens and lichenicolous fungi from Albania. *Herzogia* 16: 135–142.
- Huneck S, Lisická E. 1990. Zur Chemie von *Physcia biziana* (Massal.) Zahlbr. var. *biziana* und var. *aipolioides* Nádv. *Pharmazie* 45: 143–144.
- Jelínková E. 1973. Zur Variabilität und Verbreitung der Flechte *Physcia biziana* (Massal.) Zahlbr. im östlichen Teil Mitteleuropas. *Biológia* (Bratislava) 28: 819–826.
- Lisická E, Lackovičová A, Liška J, Lökös L, Lisický MJ. 2008. *Physcia aipolioides* – ein Beispiel einer invasiven Flechte oder einer unterschätzten Verbreitung? *Sauteria* 15: 303–318.
- Nádvorník J. 1947. *Physciaceae* Tchécoslovaques. *Studia Botanica Českoslovaca* 8 (2–4): 69–124.
- Thomson JW. 1963. The lichen genus *Physcia* in North America. *Beihefte zur Nova Hedwigia* 7: 1–172.